sodium,bis(2-methoxyethoxy)alumanide 22722-98-1 MSDS

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifiers

Product name : Red-Al® sodium bis(2-methoxyethoxy)aluminum hydride solution

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

SECTION 2: Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 2), H225

Substances and mixtures, which in contact with water, emit flammable gases (Category 1), H260

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Dermal (Category 3), H311

Skin irritation (Category 2), H315

Serious eye damage (Category 1), H318

Reproductive toxicity (Category 2), H361d

Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336

Specific target organ toxicity - repeated exposure (Category 2), H373

Aspiration hazard (Category 1), H304

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

F Highly flammable R11, R15

C Corrosive R34

Xn Harmful R65, R48/20

Xn Harmful R63

R14, R67

For the full text of the R-phrases mentioned in this Section, see Section 16.

Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word Danger

Hazard statement(s)

H225 Highly flammable liquid and vapour.

H260 In contact with water releases flammable gases which may ignite spontaneously.

H301 + H311 Toxic if swallowed or in contact with skin

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H336 May cause drowsiness or dizziness.

H361d Suspected of damaging the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P223 Do not allow contact with water.

P231 + P232 Handle under inert gas. Protect from moisture.

P261 Avoid breathing vapours.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P422 Store contents under inert gas.

Supplemental Hazard information (EU)

EUH014 Reacts violently with water.

According to European Directive 67/548/EEC as amended.

Hazard symbol(s) F Highly flammable

C Corrosive

R-phrase(s)

R11 Highly flammable.

R14/15 Reacts violently with water, liberating extremely flammable gases.

R34 Causes burns.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R63 Possible risk of harm to the unborn child.

R65 Harmful: may cause lung damage if swallowed.

R67 Vapours may cause drowsiness and dizziness.

S-phrase(s)

S9 Keep container in a well-ventilated place.

S16 Keep away from sources of ignition - No smoking.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S43 In case of fire, use sand, dry chemical or alcohol-resistant foam.

Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and

toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

Mixtures

Synonyms : Red-Al®, Sodium bis(2-methoxyethoxy) aluminum hydride solution

SBAH

Sodium dihydrido-bis(2-methoxyethoxy)aluminate

Sodium bis(2-methoxyethoxy)aluminum dihydride

Formula : C6H16AlNaO4

Molecular weight : 202,16 g/mol

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component Classification Concentration

Sodium dihydridobis(2-methoxyethanolato)aluminate(1-)

CAS-No. 22722-98-1 Water-react. 1; Skin Corr. 1B; >= 50 - <= 100

EC-No. 245-178-2 H260, H314, EUH014 %

Toluene

CAS-No. 108-88-3 Flam. Liq. 2; Skin Irrit. 2; Repr. >= 25 - < 50 %

EC-No. 203-625-9 2; STOT SE 3; STOT RE 2;

Index-No. 601-021-00-3 Asp. Tox. 1; H225, H304,

Registration number 01-2119471310-51-XXXX H315, H336, H361d, H373

Hazardous ingredients according to Directive 1999/45/EC

Component Classification Concentration

Sodium dihydridobis(2-methoxyethanolato)aluminate(1-)

CAS-No. 22722-98-1 F, C, R14/15 - R34 >= 50 - <= 100

EC-No. 245-178-2 %

Toluene

CAS-No. 108-88-3 F, Xn, Repr.Cat.3, R11 - R38 - >= 25 - < 50 %

EC-No. 203-625-9 R48/20 - R63 - R65 - R67

Index-No. 601-021-00-3

Registration number 01-2119471310-51-XXXX

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with

water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Dry powder

Special hazards arising from the substance or mixture

Hydrogen gas, Carbon oxides, Aluminum oxide, Sodium oxides

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

No data available

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Do not flush with water.

Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are

opened must be carefully resealed and kept upright to prevent leakage.

Never allow product to get in contact with water during storage.

Storage class (TRGS 510): Hazardous materials, which set free flammable gases upon contact with water

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

Control parameters

Components with workplace control parameters

Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling

the product.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Fluorinated rubber

Minimum layer thickness: 0,7 mm

Break through time: 480 min

Material tested:Vitoject® (KCL 890 / Z677698, Size M)

Splash contact

Material: Fluorinated rubber

Minimum layer thickness: 0,7 mm

Break through time: 480 min

Material tested:Vitoject® (KCL 890 / Z677698, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374,

contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air

respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

a) Appearance	Form: liquid Colour: light yellow
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	No data available
f) Initial boiling point and boiling range	110 °C
g) Flash point	4 °C - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 7 %(V) Lower explosion limit: 1,27 %(V)
k) Vapour pressure	28 hPa at 20 °C
l) Vapour density	No data available
m) Relative density	1,036 g/mL at 25 °C
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available

q) Decomposition temperature 205 °C -

r) Viscosity No data available

s) Explosive properties No data available

t) Oxidizing properties No data available

Other safety information

No data available

SECTION 10: Stability and reactivity

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Reacts violently with water.

Conditions to avoid

Heat, flames and sparks. Exposure to moisture.

Incompatible materials

Water, Oxidizing agents, Combustible material

Hazardous decomposition products

Reacts with water to form: - Hydrogen gas

Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

No data available

LD50 Dermal - Rabbit - > 200 mg/kg

Skin corrosion/irritation

Skin - Rabbit

Result: Severe skin irritation

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Toluene)

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

Toxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects

Toxic to aquatic life.

SECTION 13: Disposal considerations

Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

UN number

ADR/RID: 3399 IMDG: 3399 IATA: 3399

UN proper shipping name

ADR/RID: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE (Sodium dihydridobis(2-methoxyethanolato)aluminate(1-))

IMDG: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE (Sodium dihydridobis(2-methoxyethanolato)aluminate(1-))

IATA: Organometallic substance, liquid, water-reactive, flammable (Sodium dihydridobis(2-methoxyethanolato)aluminate(1-))

Passenger Aircraft: Not permitted for transport

Transport hazard class(es)

ADR/RID: 4.3 (3) IMDG: 4.3 (3) IATA: 4.3 (3)

Packaging group

ADR/RID: I IMDG: I IATA: I

Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

Special precautions for user

No data available

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture

No data available

Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

Asp. Tox. Aspiration hazard

EUH014 Reacts violently with water.

Flam. Liq. Flammable liquids

H225 Highly flammable liquid and vapour.

H260 In contact with water releases flammable gases which may ignite spontaneously.

H301 Toxic if swallowed.

H304 May be fatal if swallowed and enters airways.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H336 May cause drowsiness or dizziness.

H361d Suspected of damaging the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

Repr. Reproductive toxicity

Skin Corr. Skin corrosion

Skin Irrit. Skin irritation

Full text of R-phrases referred to under sections 2 and 3

C Corrosive

F Highly flammable

R11 Highly flammable.

R14 Reacts violently with water.

R14/15 Reacts violently with water, liberating extremely flammable gases.

R15 Contact with water liberates extremely flammable gases.

R34 Causes burns.

Xn Harmful

R38 Irritating to skin.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R63 Possible risk of harm to the unborn child.

R65 Harmful: may cause lung damage if swallowed.

R67 Vapours may cause drowsiness and dizziness.

Repr.Cat.3 Toxic to Reproduction Category 3

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.